

Track: Project Unify



Table of Contents

Introduction to Project Unify	3
The Homeless Management Information System Data Standard	3
Additional Information	3
Scenario 1	4
Queries for Scenario 1 Using the IOL HAPI FHIR® Interface	8
Query 1 – Finding A Patient By SSN	8
Queries for Scenario 1 Using the HSLynk API	11
Using the HSLynk APIs	11
API Examples	15
Finding a homeless client in HSLynk (Golden View)	15
Looking up a value for a 2020 HUD HMIS Data Element, if you have the key	16
Determining the client’s veteran status	17
Finding other members of the client’s household	17
Examining a homeless client’s program enrollments	18
Determining program outcomes (exits) for a client	20
Getting Notified by HSLynk	22
HSLynk High Level Data Model	22
HSLynk How-to Guides	22
Example App Accessing HSLynk	22
Judging Criteria	23
Appendix: Additional Information	24

Introduction to Project Unify

The Project Unify Track explores the access, matching, and analysis of both health care patient data and human services client data, with the goal of demonstrating Social Determinants of Health (SDoH) concepts.

The National Interoperability Collaborative's "Project Unify"¹ has specified a use scenario for SDoH, specifically for the social determinant of "Housing Instability"¹. A homeless person's human services outcomes can inform the person's health care outcomes, and vice versa. To link the two areas of health and human services, **this track will involve queries of mock data from an Interoperability Land (IOL) electronic health record server (FHIR®) and a human services server (HSLynk), using APIs.** The identifiers of the main patient will match between systems. Later in this document are recipes for common operations one can perform on these two types of servers.

[Track Overview Presentation](#)

Contact the Track Hosts on Slack

Please send an email to eric@alexandriaconsulting.com to request access to <https://hslynk.slack.com> #interopathon, if you have questions, or wish to discuss your idea.

The Homeless Management Information System Data Standard

HSLynk is a full, open source Platform as a Service implementation of the HUD Homeless Management Information System (HMIS) Data Standard versions 2014- 2020². The Data Standard for HMIS is located at <https://www.hudexchange.info/resource/3824/hmis-data-dictionary/>.

Particularly useful is the Data Dictionary, for definitions. The HMIS Logical model is also useful. A diagram of the model can be located at: https://hudhdx.info/Resources/Vendors/HMIS_2020_Model_v1_4.png. Note that many of the entities in the diagram radiate from the client enrollment in an HMIS Project (the HMIS term for a homeless services program).

Additional Information

Additional information provided by HSLynk for this Interopathon is available here:

https://docs.google.com/document/d/1VF11lpwzG_nf9V9IPWOGWw0VVI3DPi4DhFlgd9rjHEY/edit?usp=sharing

¹ see <https://confluence.hl7.org/display/GRAV/The+Gravity+Project>

² see the 2020 HMIS Data Dictionary at <https://files.hudexchange.info/resources/documents/HMIS-Data-Dictionary.pdf>

Scenario 1

Technical Sergeant Jim Tyler Beasley, a veteran, has had a difficult life since he separated from the service. He returned from his final deployment anxious to save his marriage, support his wife through opioid rehabilitation, and reunite with his son. His return did not go as he had hoped. Because he transitioned out of the service without the required transition assistance planning, he has had difficulty finding a steady job, lacks savings to buffer his transition, and, with untreated PTSD, has had an angry and violent relationship with his wife Sarah. He turns to alcohol. After many tempestuous months, Sarah and Jim agree to a divorce.

Without any personal savings and without a job, Jim is now homeless and has moved to Florida. He enrolls in a shelter program supported by a Homeless Management Information System (HMIS). The HMIS monitoring the enrollment has some Social Determinants of Health (SDoH) screeners being triggered and consequently does a patient search in the homeless client's local/regional Health Information Exchange (HIE).

The HMIS finds a match for that homeless person's health record in the County Health Department system and transmits the SDoH data for the homeless client to the HIE from the HMIS. The HIE adds this HMIS transmitted data to the homeless patient's health record, which may be combined with SDoH data from other sources. The preponderance of a combined 5 high risk SDoH determinants arriving for this homeless individual, causes emergency intervention resources to be applied to this individual.

Action: Create an application and/or PPT solution that utilizes both IOL and HSLink data to identify, gather, and display critical information about high risk SDoH individuals.

Precondition: Using instructions in the sections below, log in to IOL and authenticate to HSLink in order to query Jim Tyler Beasley's information from both the IOL Electronic Health Record and HS Link's API. Note that Jim Beasley is the only patient that exists in both IOL and HSLink.

Success Criteria: Create an application and/or PPT solution that is innovative, unique, complex, and improves interoperability (see *Judging Criteria* below for further detail)

Examples and information to provide inspiration to create your solution:

- Look for screeners data elements in the HSLink persona data sets

- Draft a Housing Instability master screener list (with example housing -> health code set mappings):
<https://confluence.hl7.org/download/attachments/76157877/Housing%20Instability%20MASTER%2020200515.xlsx?api=v2>
- [Gravity Project Housing Instability SDoH page](#)
- Gather HMIS *Data Elements of note* (below) for the Housing Instability Social Determinant
 - [Living Situation](#). [API call](#) in HSLynk.
 - Chronic Homelessness - another element worth looking at, is sort of longitudinal. It's an HMIS boolean field called "Chronic Homelessness Status". It's not in the HMIS Data Dictionary but rather in the [HMIS Reporting Glossary](#), because it's a report field derived from other Dictionary Data elements, over a max 3 year period of time. It's a little complicated, but these are often the most vulnerable homeless people in an HMIS. Here's the definition:

A “chronically homeless” individual is defined to mean a homeless individual with a disability who lives either in a place not meant for human habitation, a safe haven, or in an emergency shelter, or in an institutional care facility if the individual has been living in the facility for fewer than 90 days and had been living in a place not meant for human habitation, a safe haven, or in an emergency shelter immediately before entering the institutional care facility. In order to meet the “chronically homeless” definition, the individual also must have been living as described above continuously for at least 12 months, or on at least four separate occasions in the last 3 years, where the combined occasions total a length of time of at least 12 months. Each period separating the occasions must include at least 7 nights of living in a situation other than a place not meant for human habitation, in an emergency shelter, or in a safe haven. ([source](#))

As complicated as it is to calculate, you can simply [get a person's chronic homelessness status with a single HSLynk API call](#)).

```

{
  "dateCreated": "2018-09-23",
  "dateUpdated": "2018-09-23",
  "disablingCondition": 1,
  "entryDate": -19799999,
  "monthsHomelessPastThreeYears": 101,
  "projectId": "5958e1b7-0296-4821-b183-ae9967217579",
  "timesHomelessPastThreeYears": 1,
  "yearsHomeless": 0,
  "chronicHomeless": 1,
  "losUnderThreshold": 1,
  "previousStreetESSH": 1,
  "hmisHouseholdId": "8e956388-b909-41ea-b1d0-203e9cc15c45",
  "genericHouseHoldId": "1520d4ac-2998-4825-80a6-2f550c37f3f1"
}

```

Patient Generated for the InterOpathon

While additional family member personas exist in HSLynk, **Jim Tyler Beasley is the only patient generated in Interoperability Land for this SDoH track.** This is the only patient that will match between the IOL Soldier Health Care Alliance FHIR® server and the HSLynk server. A person with the same PII (SSN, FN, MN, LN, DOB, Gender) will be added to HSLynk's "Project Unify" test account (aka "project group") for this InterOpathon.

Below is an example result of IOL query in the Soldier Health Care Alliance PIT. Note the highlighted information in the result below. For more information on how to make a query in this PIT, see the *Queries for Scenario 1 Using the IOL HAPI FHIR® Interface* section.

```
{
  "fullUrl": "https://dev-smw32.devinteropland.com/soldier-healthcare-
alliance/FHIR®/Patient/34938",
  "resource": {
    "resourceType": "Patient",
    "id": "34938",
    "meta": {
      "versionId": "1",
      "lastUpdated": "2020-04-25T00:28:35.000+00:00",
      "source": "#J8xaN0pxFeNBSksv"
    },
  },
}
```

```

"text": {
  "status": "generated",
  "div": "<div xmlns=\"http://www.w3.org/1999/xhtml\">This is a simple narrative with only
plain text</div>"
},
"extension": [
{
  "url": "http://mihin.org/extension/copyright",
  "valueString": "Copyright 2014-2020 Michigan Health Information Network Shared
Services. Licensed under the Apache License, Version 2.0 (the 'License'); you may not use this file
except in compliance with the License. You may obtain a copy of the License at
http://www.apache.org/licenses/LICENSE-2.0. Unless required by applicable law or agreed to in
writing, software distributed under the License is distributed on an 'AS IS' BASIS, WITHOUT
WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the
specific language governing permissions and limitations under the License."
},
{
  "url": "http://hl7.org/FHIR®/us/core/StructureDefinition/us-core-race",
  "valueCodeableConcept": {
    "coding": [
      {
        "system": "http://hl7.org/FHIR®/v3/Race",
        "code": "2106-3",
        "display": "White"
      }
    ]
  }
},
{
  "url": "http://hl7.org/FHIR®/us/core/StructureDefinition/us-core-ethnicity",
  "valueCodeableConcept": {
    "coding": [
      {
        "system": "http://hl7.org/FHIR®/v3/Ethnicity",
        "code": "2186-5",
        "display": "Not Hispanic or Latino"
      }
    ]
  }
},
{
  "url": "http://hl7.org/FHIR®/us/core/StructureDefinition/us-core-religion",
  "valueCodeableConcept": {
    "coding": [
      {
        "system": "http://hl7.org/FHIR®/v3/ReligiousAffiliation",

```

```

        "code": "1026",
        "display": "Judaism"
      }
    ]
  },
  {
    "url": "http://mihin.org/FHIR®/extension/reference/master",
    "valueString": "https://dev-jtx39.devinteroiland.com/mihinss/FHIR®/Patient/3784"
  }
],
"identifier": [
  {
    "use": "official",
    "type": {
      "coding": [
        {
          "system": "http://hl7.org/FHIR®/identifier-type",
          "code": "SB",
          "display": "Social Beneficiary Identifier"
        }
      ]
    }
  },
  {
    "system": "http://hl7.org/FHIR®/sid/us-ssn",
    "value": "000003049"
  },
  {
    "use": "official",
    "type": {
      "coding": [
        {
          "system": "http://hl7.org/FHIR®/identifier-type",
          "code": "SB",
          "display": "Social Beneficiary Identifier"
        }
      ]
    }
  },
  {
    "system": "http://mihin.org/FHIR®/cks",
    "value": "c330731ea74d490ebe090b2a798b7355"
  }
],
"active": true,
"name": [
  {
    "use": "usual",
    "family": "Beasley",

```



```

    "given": [
      "Jim",
      "Tyler"
    ]
  },
  "telecom": [
    {
      "system": "phone",
      "value": "248-555-2654",
      "use": "home"
    },
    {
      "system": "phone",
      "value": "248-555-0771",
      "use": "mobile"
    }
  ],
  "gender": "male",
  "birthDate": "1965-04-28",
  "address": [
    {
      "use": "home",
      "type": "postal",
      "line": [
        "837 Third Road"
      ],
      "city": "Troy",
      "district": "Oakland County",
      "state": "MI",
      "postalCode": "48098"
    }
  ],
  "generalPractitioner": [
    {
      "reference": "Practitioner/151",
      "display": "Joy Tamara McMahon MD"
    }
  ],
  "search": {
    "mode": "match"
  }
}

```

Queries for Scenario 1 Using the IOL HAPI FHIR® Interface

Query 1 – Finding A Patient By SSN

Because the IOL HAPI FHIR® Interface only supports a limited set of search parameters, an additional initial query is necessary to find the Patient record by SSN. The id of the Patient record we find will be used in future queries.

Searching for a patient requires selecting the Patient option from the resource's navigation menu on the left side of the page. Specifying the SSN to search for is then accomplished by selecting the identifier option in the search parameters dropdown, then entering the target SSN in the code field to the right (as seen below SSN 000003044 is used in this example)



This query produces the result shown below. Pay particular attention to the lower-right area of the screen, which contains the section labelled Result Body. This is the data returned in response to the query.

Request

GET https://wxydps-bcbstm.interopland.com/five-lakes-health-system/fhir/Patient?identifier=000003044&_pretty=true

Request Headers

Accept-Charset: utf-8
Authorization: Basic aW50ZXI2VjVhbnQ0b2RpdjVjIjE3WkxPZS9VPMH0U1ZTQwcmhwaWtSRjw0
Accept: application/fhir+xml;q=1.0, application/fhir+json;q=1.0, application/xml+fhir;q=0.9
User-Agent: HAPI-FHIR/3.7.0 (FHIR Client; FHIR 4.0.0/R4; apache)
Accept-Encoding: gzip

Response

HTTP 200

Response Headers

date: Fri, 17 Jan 2020 16:04:44 GMT
access-control-allow-origin: *
last-modified: Fri, 17 Jan 2020 16:04:45 GMT
transfer-encoding: chunked
access-control-allow-headers: Origin, Content-Type, X-Auth-Token, Authorization
x-powered-by: HAPI FHIR 3.7.0 REST Server (FHIR Server) FHIR 4.0.0/R4
content-type: application/fhir+json;charset=utf-8
connection: keep-alive
access-control-allow-methods: GET, POST, PATCH, PUT, DELETE, OPTIONS

Result Body

JSON bundle (4985 bytes)

Bundle contains 1 / 1 entries

ID	Updated
Read Update Patient/4754c_history/1	2020-01-10 20:48:13

Raw Message

```
{
  "resourceType": "Bundle",
  "id": "037f3004-1be5-42a5-d0e4-77f6c55279fb",
  "meta": {
    "lastUpdated": "2020-01-17T16:04:45.703+00:00"
  },
  "type": "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://wxydps-bcbstm.interopland.com/five-lakes-health-system/fhir/Patient?identifier=000003044&_pretty=true"
    }
  ]
}
```

The Result Body section in this case contains a line at the top that reads “Bundle contains 1 / 1 entries”. This line shows how many results matched the query that was specified; the first number is the count of results included in this response, the second is the total number of records satisfying that query in this PIT. When a query matches a large number of records, the numbers can be different because the FHIR® server has a limit on the number of records it can return in a single response.

Below the summary section is a section labelled Raw Message. This section contains the actual data sought by the query (in this case, a Patient record identified by the supplied SSN).

Raw Message

```
{
  "resourceType": "Bundle",
  "id": "837f3004-13e5-4da9-bde4-77f8655879fb",
  "meta": {
    "lastUpdated": "2020-01-17T16:04:45.788+00:00"
  },
  "type": "searchset",
  "total": 1,
  "link": [
    {
      "relation": "self",
      "url": "https://wxlydjsx-bcbsm.interopland.com/five-lakes-health-system/fhir/Patient?pretty=true&identifier=000005044"
    }
  ],
  "entry": [
    {
      "fullUrl": "https://wxlydjsx-bcbsm.interopland.com/five-lakes-health-system/fhir/Patient/1754",
      "resource": {
        "id": "1754",
        "versionId": "1",
        "lastUpdated": "2020-01-10T20:48:13.000+00:00",
        "text": {
          "status": "generated",
          "div": "<div xmlns='http://www.w3.org/1999/xhtml'>This is a simple example with only plain text</div>"
        },
        "extension": [
          {
            "url": "http://hl7.org/extension/copyright",
            "valueString": "Copyright 2014-2019 Michigan Health Information Network Shared Services. Licensed under the Apache License, Version 2.0 (the 'License'); you may not use this file except in compliance with the License. You may obtain a copy of the license at http://www.apache.org/licenses/LICENSE-2.0. Unless required by applicable law or agreed to in writing, software distributed under the license is distributed on an 'AS IS' BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License."
          },
          {
            "url": "http://hl7.org/fhir/us/core/StructureDefinition/us-core-race",
            "valueCodeableConcept": {
              "coding": [
                {
                  "system": "http://hl7.org/fhir/v3/Race",
                  "code": "2106",
                  "display": "white"
                }
              ]
            }
          },
          {
            "url": "http://hl7.org/fhir/us/core/StructureDefinition/us-core-ethnicity",
            "valueCodeableConcept": {
              "coding": [
                {
                  "system": "http://hl7.org/fhir/v3/Ethnicity",
                  "code": "H",
                  "display": "Hispanic or Latino"
                }
              ]
            }
          }
        ]
      }
    }
  ]
}
```

There is a wealth of information about the patient here, but the main field of interest for purposes of this exercise is the id. Specified under the “resource” element of a member of the “entry” collection, this is the unique identifier of this

```
"entry": [
  {
    "fullUrl": "https://wxlydjsx-bcbsm.interopland.com/five-lakes-health-system/fhir/Patient/1754",
    "resource": {
      "resourceType": "Patient",
      "id": "1754",
      "meta": {
        "versionId": "1",
        "lastUpdated": "2020-01-10T20:48:13.000+00:00"
      }
    }
  }
]
```

particular patient record within the PIT. It is what other records will use to refer to this patient and thus can be used to search for only records relevant to this patient.

Queries for Scenario 1 Using the HSLynk API

Using the HSLynk APIs

HSLynk API documentation is available at <https://docs.hslynk.com> Any of the code values

A Trusted App account is required to access the data stored in the HSLynk platform. That account can be established at <https://developers.hslynk.com>. For more info on this process, please read [this article](#). Please reference the workflow in the first tab from the left, then click on the next tabs sequentially to complete. You will receive an approval email, per the workflow.

After the account and Trusted App ID are obtained, HSLynk Platform uses OAuth open-standard protocol to allow a user to authorize a Trusted App (aka client) to access data stored in the HSLynk, after he/she has been authenticated (logged- in).

The following are the basic steps to access data from HSLynk using APIs.

1. Register Trusted App
2. Obtain Access token from HSLynk Authorization service
3. Make HSLynk API calls (using access token obtained in step 2)
4. Obtain Refresh token (Optional)

1 - Register Trusted App

Follow the prompts in the workflow at: <https://developers.hslynk.com>.

2 - Obtain Access token from HSLynk Authorization service

Before a Trusted App (aka client) can access HSLynk APIs, it must obtain an access token that grants access to the APIs. There are several ways to make this request, and they vary based on the type of Trusted App. The request requires the user to login to HSLynk. After logging in, the user will see the permissions (list of APIs to be accessed) requested by the application and is asked if he/she is willing to grant the application those permissions. This process is called "user consent".

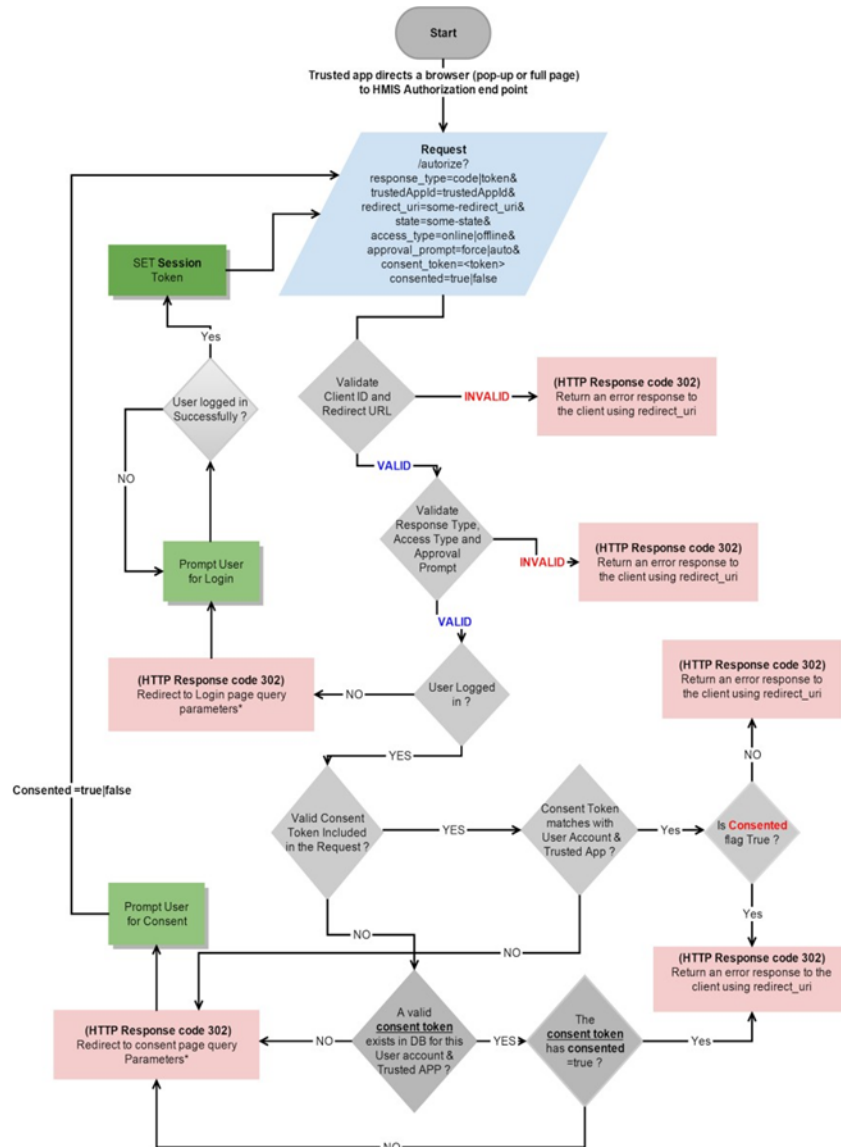
For this InterOpathon, we've created the following users to make API calls to HSLynk and they all have a common password, Summer#2020

green.tree@hslynk.com
blue.moon@hslynk.com
tiger.king@hslynk.com

For instructions on how to create additional accounts, please see the HMIS User Service documentation at <https://docs.hslynk.com/?urls.primaryName=User%20Service%20%20API>

If the user grants permission to the Trusted App, the Trusted App will be sent an access token or an authorization code (which is used to obtain an access token). If the user does not grant permission to the application, the HSLynk Authorization Service returns an error.

3 - Make HSLynk API calls (using access token obtained in step 2)



(from <https://github.com/servinglynk/hslynk-open-source-docs/wiki/User-Authorization-and-Access-control-in-HSLynk>)

After the Trusted App (aka client) has obtained an access token, it may send the access token in a request to a HSLynk API. The Access token is sent to a HSLynk API in the HTTP Authorization header as shown below.

Authorization: Bearer 2YotnFZFEjr1zCsicMWpAA

You need to construct the authorization header 'authorization': 'Basic:ASDFASDFdsfnalsdfk', Code sample:

<https://github.com/ctagroup/home-app/blob/przemyslaw/imports/api/hmis-api/hmis-client.js>

authorization is a combination of trusted app id : app secret and then base64 encoded. (edited)

```
const authorization = new Buffer(`${appId}:${appSecret}` || '');
responseContent = HTTP.post(url, {
  headers: {
    'X-HMIS-TrustedApp-Id': appId,
    Authorization: authorization.toString('base64'),
    Accept: 'application/json',
    'Content-Type': 'application/json',
  },
},
```

(from <https://github.com/servinglynk/hslynk-open-source-docs/wiki/Authentication-using-the-HSLynk-APIs>)

4 - Obtain Refresh token

Access tokens have a limited lifetime and, in some cases, an application (aka client) needs access to HSLynk APIs beyond the lifetime of a single access token. When this is the case, the application can obtain what is called a refresh token. A refresh token allows the application to obtain new access tokens.


Here is the API documentation link for the Authorization API

<https://docs.hslynk.com/?urls.primaryName=Authorization%20Service%20API#/>

Also, for more details please look at the following documentation

<https://github.com/servinglynk/hslynk-open-source-docs/wiki/HSLynk-Platform-OAUTH-documentation>

← → ↻ <https://docs.hslynk.com>

 **Swagger**
Supported by SMARTBEAR

Select

Global Human Services

1.5.2 OAS3

[global-api.yaml](#)

Note : Please note that the partial updates are supported via PUT APIs. However, Note that If "null" value is passed value should be sent (instead of "null" value) for the elements that need to be updated with NULL values.

Servers

<https://api.hslynk.com/hmis-globalapi/rest> ▼

default

GET	/search/{searchentity}
POST	/globalprojects
GET	/globalprojects
PUT	/globalprojects/{globalprojectid}

Users and Roles

Though HSLink supports various roles for each users, it may be easiest for this first SDoH Track to have one user and role for your app, as it simplifies searches for resources within HSLink, and avoids further filtering of records.

API Examples

Typically, one starts with a client search, which returns a “Golden View” of client activity (enrollments, households, surveys, etc.). For the InterOpathon we may restrict all Trusted Apps to GET or POST methods, so the initial data set will minimally stay intact. That way teams will not trample on each other’s data. Additions or retrievals are intended activities.

Finding a homeless client in HSLynk (Golden View)

API Documentation	https://docs.hslynk.com/?urls.primaryName=Global%20API#/default/GET_search-searchentity
Sample URL	https://api.hslynk.com/rest/hmis-clientapi/rest/search/clients?q=Ste&startIndex=0&maxItems=30

```
{
  "searchResults": {
    "pagination": {
      "from": 0,
      "returned": 1,
      "total": 1,
      "maximum": 50,
      "sort": {
        "field": "id",
        "order": "asc"
      }
    }
  },
  "items": [
    {
      "clientId": "0f23d93e-23c3-435e-baec-ec267f13f66c",
      "dedupClientId": "ad9a9390-bcd7-11e9-a57b-02fe61f7063e",
      "firstName": "Ryan_1565597013222",
      "middleName": "",
      "lastName": "Peterson_1565597013222",
      "nameSuffix": "NS",
      "nameDataQuality": 1,
      "ssn": "123-45-6789",
      "ssnDataQuality": 1,
      "dob": "340009200000",
      "dobDataQuality": 1,
      "race": 1,
      "ethnicity": 1,
      "gender": 0,
      "phoneNumber": "123456779",
      "emailAddress": "test@test.com",
      "link": "/hmis-clientapi/rest/v2017/clients/0f23d93e-23c3-435e-baec-ec267f13f66c",
      "projectGroupCode": "PG0001",
      "link": "/hmis-clientapi/rest/v2017/clients/0f23d93e-23c3-435e-baec-ec267f13f66c"
    }
  ]
}
```

```

"link": "/hmis-clientapi/rest/v2017/clients/0f23d93e-23c3-435e-baec-ec267f13f66c",
"projectGroupCode": "PG0001",
"links": {
  "eligibleClients": {
    "data": [
      {
        "rel": "0f23d93e-23c3-435e-baec-ec267f13f66c",
        "href": "https://www.hslynk.com/house-matching-api/rest/eligibleclients/0f23d93e-23c3-435e-baec-ec267f13f66c"
      }
    ]
  },
  "survey.submissions": {
    "data": [
      {
        "rel": "528fac1-ccb6-436a-bd97-8cd6e00c5105",
        "href": "https://www.hslynk.com/survey-api/rest/clients/0f23d93e-23c3-435e-baec-ec267f13f66c/surveys/5d3f239c-fdf5-4886-8d3d-4d3d4d3d4d3d"
      }
    ]
  },
  "enrollments": {
    "data": [
      {
        "rel": "d9845282-afd5-43e8-8935-1ae186a04dea",
        "href": "https://www.hslynk.com/hmis-clientapi-v2017/rest/clients/0f23d93e-23c3-435e-baec-ec267f13f66c/enrollments/d9845282-afd5-43e8-8935-1ae186a04dea"
      }
    ]
  }
}

```

Looking up a value for a 2020 HUD HMIS Data Element, if you have the key

From the API example above, you can see that codes are returned. You can look the codes up in the Data Dictionary

<https://files.hudexchange.info/resources/documents/HMIS-Data-Dictionary.pdf>.

Determining the client's veteran status

API Documentation	https://docs.hslynk.com/?urls.primaryName=HMIS%20vFY2020%20API%2C%202020%20API#/default/GET_clients-clientId
Sample URL	https://api.hslynk.com/rest/hmis-clientapi/rest/v2020/clients/a11e25d5-5a15-4daa-a25f-58d90908bb9f

```
{
  "client": {
    "links": [
      {
        "rel": "history",
        "href": "/client/fcf97f5e-8a37-4f29-b6d5-6269684f6666/history"
      }
    ]
  },
  "clientId": "fcf97f5e-8a37-4f29-b6d5-6269684f6666",
  "dedupClientId": "8db39fc8-e2e3-11e9-a57b-82fe61f7803e",
  "firstName": "Taylor",
  "middleName": "Robin",
  "lastName": "Steve",
  "nameSuffix": "TS",
  "nameDataQuality": 2,
  "ssn": "188-xx-xxxx",
  "ssnDataQuality": 2,
  "dob": 1473746618394,
  "dobDataQuality": 9,
  "race": 2,
  "ethnicity": 99,
  "gender": 2,
  "veteranStatus": "99"
}
```

Finding other members of the client's household

GET /globalhouseholds

Examining a homeless client's program enrollments

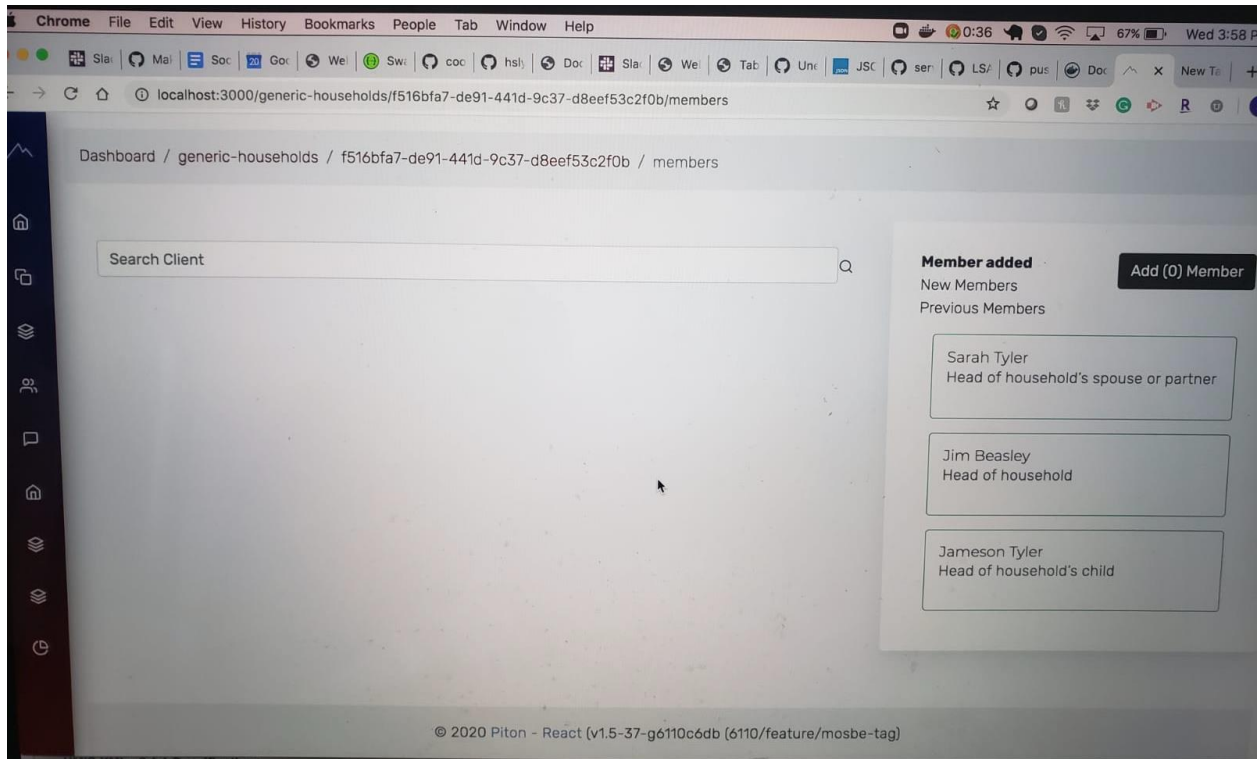
API Documentation	https://docs.hslynk.com/?urls.primaryName=HMIS%20vFY2020%20API%2C%202020%20API#/default/GET_clients-clientId-enrollments
Sample URL	https://api.hslynk.com/rest/hmis-clientapi/rest/v2020/clients/a11e25d5-5a15-4daa-a25f-58d90908bb9f/enrollments?startIndex=0&maxItems=10

```
{
  "enrollments": {
    "pagination": {
      "from": 0,
      "returned": 2,
      "total": 2,
      "maximum": 30,
      "sort": {
      }
    }
  },
  "enrollments": [
    {
      "dateCreated": "2019-10-30",
      "dateUpdated": "2019-10-30",
      "links": {
        {
          "rel": "history",
          "href": "/clients/fcf97f5e-0a37-4f29-b6d6-6269604f6666/enrollments/f1dec4e7-d36e-46f1-ba24-2c532bec20be/history"
        }
      }
    },
    {
      "enrollmentId": "f1dec4e7-d36e-46f1-ba24-2c532bec20be",
      "disablingCondition": 1,
      "entryDate": "1970-01-01",
      "monthsHomelessPastThreeYears": 101,
      "projectId": "3416ce06-0606-4880-a89c-ca3d5c3a89a9",
      "timesHomelessPastThreeYears": 1,
      "yearsHomeless": 0,
      "wasUnderThreshold": 1,
      "previousStreetESSH": 1,
      "source": "2020"
    }
  ]
}
```

```

    "disablingCondition": 1,
    "entryDate": "1978-01-01",
    "monthsHomelessPastThreeYears": 101,
    "projectId": "3416ce06-0606-4880-a89c-ca3d5c3a89a9",
    "timesHomelessPastThreeYears": 1,
    "yearsHomeless": 0,
    "losUnderThreshold": 1,
    "previousStreetESSH": 1,
    "source": "2020"
  },
  {
    "dateCreated": "2019-10-30",
    "dateUpdated": "2019-10-30",
    "links": [
      {
        "rel": "history",
        "href": "/clients/fcf97f5e-0a37-4f29-bd66-6209604f6666/enrollments/7d8b5853-ea01-40f7-9fec-194b2492ee6b/history"
      }
    ],
    "enrollmentId": "7d8b5853-ea01-40f7-9fec-194b2492ee6b",
    "disablingCondition": 1,
    "entryDate": "1978-01-01",
    "monthsHomelessPastThreeYears": 101,
    "projectId": "bb713c44-bd97-422f-82c1-9bf718d1f758",
    "timesHomelessPastThreeYears": 1,
    "yearsHomeless": 0,
    "losUnderThreshold": 1,
    "previousStreetESSH": 1,
    "source": "2020"
  }
]
}

```



Determining program outcomes (exits) for a client

API Documentation	https://docs.hslynk.com/?urls.primaryName=HMIS%20vFY2020%20API%2C%202020%20API#/default/GET_clients-clientId-enrollments-enrollmentId-exits
Sample URL	https://api.hslynk.com/rest/hmis-clientapi/rest/v2020/clients/a11e25d5-5a15-4daa-a25f-58d90908bb9f/enrollments/b55f85c7-4591-4bcc-9dfa-69cc255b2803/exits?startIndex=0&maxItems=10

Getting Notified by HSLynk

HSLynk does not yet have 3rd-party application user space push notifications. This is a feature we look to add in the near future. You will have to poll HSLynk for updates.

HSLynk High Level Data Model

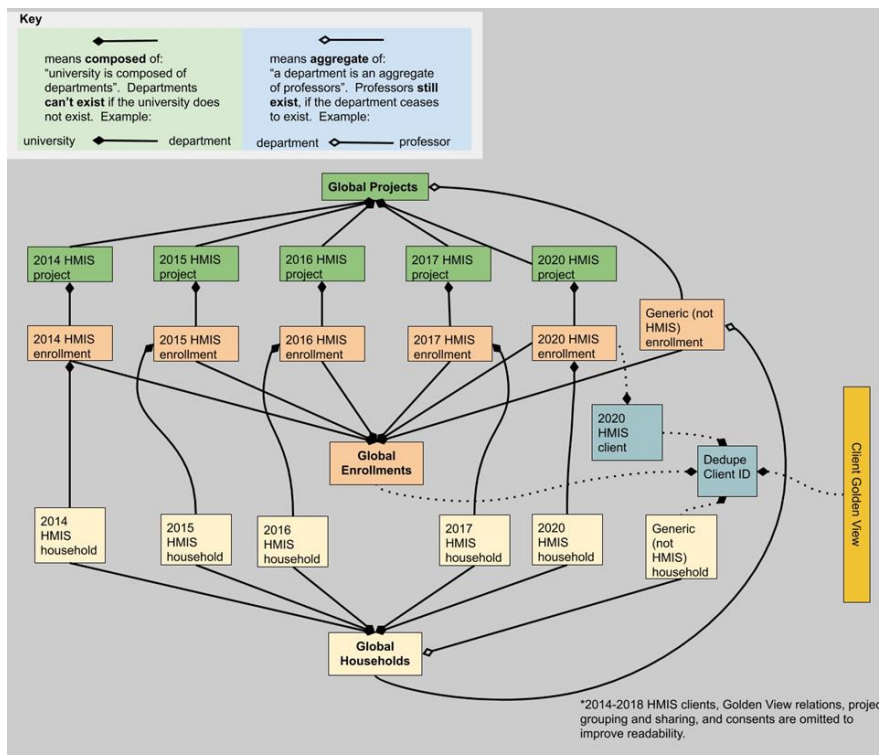
This diagram serves as a roadmap to the different functional areas of HSLynk. In a nutshell, clients are enrolled within projects. These can all be grouped under global client ids, global enrollments (multi-year/data standard), and global projects.

HSLynk How-to Guides

<https://github.com/servinglynk/hslynk-open-source-docs/wiki/HSLynk-How-Tos>

Example App Accessing HSLynk

<https://github.com/ctagroup/home-app>



Judging Criteria

IGNITE

Interoperability: APIs and FHIR® Heat Up



Alignment with Track	Helps to improve Inter-operability	Innovation & Creativity	Use of APIs	User Experience	Technical Difficulty	Presentation or Demo
25%	25%	15%	10%	10%	10%	5%
How aligned was the solution with one of the event Tracks?	Does the team clearly show how their solution could be used to improve interoperability?	Did the team create something that has not already been created? Is it unique?	Did the team use APIs available to create a solution?	What is the wow factor? Would others be impressed by what was built? How easy is the solution to use?	Is the project technically impressive / complex? Is it remarkable that a team created this solution in the time allowed?	Was the presentation or demo well put together? Did the team seem prepared? How well did they explain the problem and solution? (only judge on content, not video quality)

INTEROPATHON | 2020



Appendix- Additional Information

Additional Information for Project Unify- SDoH is available here:

https://docs.google.com/document/d/1VFi1lpwzG_nf9V9IPWOGWw0VVI3DPi4DhFlgd9rjHEY/edit#